

Materials of the Scientific Conference (Cont.)

SOV/6195

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

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GAYBAKYAN, D.S.; DARBINYAN, M.V.

Ibn exchange method for separating rhenium from molybdenum.
Izv. AN Arm. SSR. Khim. nauki 15 no.4:321-328 '62. (MIRA 15:11)

1. Yerevanskiy gosudarstvennyy universitet, kafedra
analiticheskoy khimii.
(Phenium—Analysis) (Molibdenum—Analysis)
(Ion exchange)

DARBINYAN, M.V.; GAYBAKYAN, D.S.

Ion exchange method for the separation of rhenium from molybdenum and other elements. Report No.3: Ion exchange separation of rhenium from molybdenum selenium, and tellurium in a strong alkaline medium. Izv. AN Arm.SSR.Khim.nauki 15 no.6:511-519 '62.
(MIRA 16:2)

1. Yerevanskiy gesudarstvennyy universitet, kafedra analiticheskoy khimii.
(Rhenium—Analysis) (Metals—Analysis) (Ion exchange)

L 12866
ACCESSION #: AP3002634

3. EWP(q)/EWT(m)/BDS AFFTC/ASD RM/EDW/JD

9/0171/63/016/003/0211/0219

AUTHOR: Gevakyan, D. S.; Darbinyan, M. V.

58
57

TITLE: Ion exchange separation of selenium and tellurium

SOURCE: AN ArmSSR. Izv. Khimicheskiye nauki, v. 16, no. 3, 1963, 211-219

TOPIC TAGS: sorption of Se, sorption of Te, Se, Te, cationite, anionite, amphoteric element

ABSTRACT: The sorption of Se and Te was investigated on cationites KU-2 and KU-1 and anionites AN-1, EDE-10p and AV-18 in a wide acidity and alkalinity range under static and dynamic conditions. Complete separation of small amounts (up to 1000 micrograms) of Se from similar amounts of Te is possible with cationites KU-2 and KU-1 at pH of 2-5. Separation cannot be effected on anionites in weak acid (0.0005 - 1.5 N HCl), only in strong acid medium: 3-6 N HCl for AN-1; 4 N for AV-18; and best separation with 4-12 N HCl on EDE-10p. The existence of TeO^{2+} ions, in analogy with other amphoteric elements, is assumed. A scheme of the chemistry of TeO^{2-} , TeO^{2+} , TeO_3^{4-} sorption on cationites and anionites is given. Orig. art. has: 3 figures, 4 tables, and 11 formulas.

Yerevan State University

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DARBINYAN, M.V.; GAYBAKYAN, D.S.

Ion exchange separation of rhenium from molybdenum on the KU-2 cation exchanger. Report No.4: Separation of rhenium from molybdenum in a medium of certain complex-forming acids. Izv.AN Arm.SSR. Khim.nauki 16 no.4:335-341 '63. (MIRA 16:9)

1. Yerevanskiy gosudarstvennyy universitet, kafedra analiticheskoy khimii.

DARBINYAN, M.V.; GAYBAKYAN, D.S.

Ion exchange separation of selenium from tellurium on the
KU-2 cation exchanger. Report No.2: Separating selenium
from tellurium in a medium of some complex-forming acids.
Izv. AN Arm. SSR. Khim. nauki 16 no.5:443-447 '63.

(MIRA 17:1)

1. Yerevanskiy gosudarstvennyy universitet, kafedra analiti-
cheskoy khimii.

1-13879-65 EVT(a)/EPF(a)-2/EWP(t)/EWP(b) Pe-4/Pu-4 IJP(c) RDW/
JD/JG/MLK/RM

ACCESSION NR: AT5002757

S/0000/64/000/000/0050/0054

AUTHOR: Darbinyan, M. V., Gaybakan, D. S.

BH

TITLE: Ion-exchange separation of rhenium from molybdenum, selenium, and tellurium in a strongly alkaline medium on anion exchange resins of varying basicity

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya. 2d, Moscow, 1962. Renniy (Rhenium); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1964, 50-54

TOPIC TAGS: rhenium, rhenium⁷⁵ extraction, column chromatography, anion exchange resin, molybdenum, selenium, tellurium, perchloric acid

ABSTRACT: A study was made of the adsorption of rhenium, molybdenum, selenium and tellurium on the following anion exchanger: strongly basic AV-18, weakly basic AN-1, and moderately basic EDE-IOP.⁷⁵ All four elements were found to be highly adsorbed on these resins in weakly acidic media (0.00001 - 0.01 N); the adsorbed species are thought to be MoO_4^{2-} , ReO_4^- , SeO_3^{2-} , and TeO_3^{2-} . In a strongly basic medium, however, the adsorption of Mo, Se, and Te decreases as a result of the competing action of the hydroxyl ion, while the adsorption of Re remains the same: the affinity of the resin for ReO_4^- is greater than for the hydroxyl ion (and

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L 23879-65

ACCESSION NR: A1502757

therefore alkalis cannot be used to desorb ReO_4^- from AV-18). The adsorption of these anions was also studied under dynamic conditions. Quantitative separation of Re from Mo, Se, and Te at high alkali concentrations (2.5 - 5.0 N) was found to be possible on AV-18; the dependence of adsorption on the flow rate and form of AV-18 was investigated; 1 N perchloric acid is a good desorbent for rhenium adsorbed on AV-18. Orig. art. has: 5 tables and 1 formula.

ASSOCIATION: None

SUBMITTED: 05Aug64

ENCL: 00

SUB CODE: MM

NO REF Sov: 000

OTHER: 000

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GAYBANYAN, D.S.; DARBINYAN, M.V.

Comparative study of rhenium and molybdenum sorption on certain
strongly basic anion exchangers. Izv. AN Arm. SSR, Khim. nauki 17
no.6:631-635 '64. (MTRA 18:6)

1. Yerevanskiy gosudarstvennyy universitet, kafedra analiticheskoy
khimii.

L 5299-66 EWT(m)/T

ACC NR: AF5024963

SOURCE CODE: UR/0286/65/000/016/0024/0024

AUTHORS: Melkonyan, G. S.; Lileyev, I. S.; Darbinyan, M. V.; Arakelyan, O. I.;
Dovlatyan, A. N.; Oganesyan, M. L.; Tokmazyan, G. S.

ORG: none

TITLE: A method for obtaining zeolites. Class 12, No. 173720 (announced by
Scientific Research Institute of Stone and Silicates (Nauchno-issledovatel'skiy
institut kamenya i silikatov))

SOURCE: Byulleten' izobreteniya i tovarknykh znakov, no. 16, 1965, 24

TOPIC TAGS: zeolite, perlite, volcanic glass

ABSTRACT: This Author Certificate presents a method for obtaining zeolites from
natural minerals by treating the latter with a base at a temperature of 50-200C.
The resulting zeolite is then strained and washed. To increase the amount of
available raw materials and to lower the cost of zeolites, perlite rock is used
as the original raw material.

SUB CODE: MT, GC / SUBM DATE: 12May64 / ORIG REF: 000 / OTH REF: 000

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UDC: 661.183.6

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L 54793-65

ENT(m)/ENG(m)/E&P(t)/EWF(b)

IJF(c) RDM/JD

ACCESSION NR: AP5010261

UR/0171/65/018/001/0018/0024

AUTHOR:

Barkov, V. P.

TRANSLATOR:

V.

TITLE:

Chromatographic separation of gold, selenium and tellurium

T

SOURCE:

AN ArmeSSA. Izvestiya. Khimicheskiye nauki, v. 18, no. 1, 1965, 18-24

T

TOPIC TAGS:

gold, tellurium, selenium, anion exchange resin, chromatography

T

ABSTRACT: The purpose of this work was a study of the possibility of the separation of gold, selenium and tellurium when they are present simultaneously in hydrochloric acid solutions, using NO, AN-2F, AV-16, AV-17 and A8-27 anionites. The degree of sorption of Au, Se and Te on these anion exchange resins was investigated in hydrochloric acid solutions ranging in concentration from pH = 5 to 10 N acid; under static and under dynamic conditions. The sorption of the above elements on different anion exchange resins as a function of pH are shown in figs. 1-5 of the Enclosure. On the basis of static experiments it was concluded that these elements can be separated at pH = 2 on weakly basic NO and AN-2F anionites and in 6 N HCl on AV-17 and AV-27 anionites. Synthetic mixtures of Au, Se and Te were analyzed. The results are very satisfactory. Analysis by the classical and by the anion exchange

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ACCESSION NR: AP5010261

methods shows the following results:

Analysis of Ore

Classical Method

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Anion exchange method in 6 N
HCl, using AV-27. 10 cm column.
Flow rate = 4 ml/min

Au	Se	Te	Au	Se	Te
0.01	0.0013	0.0043	0.097	0.0013	0.0042
0.01	0.0013	0.0043	0.096	0.0014	0.0044
0.01	0.0013	0.0043	0.097	0.0014	0.0042

Orig. art. has: 3 tables and 7 figures.

ASSOCIATION: Kafedra analiticheskoy khimii Yerevanskogo gosudarstvennogo universiteta (Analytical Chemistry Department, Yerevan State University)

SUBMITTED: 27Feb64

ENCL: 03

SUB CODE: IC, GC

NR REF Sov: 006

OTHER: 002

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DARBINYAN, M.V.; AVAKYAN, S.N.; APYAN, S.S.

Complex compounds of trivalent cerium with 1-dimethylamino-2-butyne.
Izv. AN Arm.SSR. Khim. nauki 18 no.2:214-215 '65. (MIRA 18:11)

1. Yerevanskiy gosudarstvennyy universitet, kafedra khimii.
Submitted November 5, 1964.

DARBINYAN, M.V.; CHTYAN, G.S.; MELKUMOVA, L.S.

Production of magnesium oxide and nitrates from dolomite,
Izv. AN Arm.SSR. Khim.nauki 18 no.4:341-346 '65.
(MIRA 18:12)

1. Yerevanskiy gosudarstvennyy universitet, kafedra
neorganicheskoy khimii. Submitted July 18, 1964.

DARBINYAN, M.V.; KAPANTSYAN, E.Ye.

Extraction of gold by anion exchangers. Izv. AN Arm. SSR,
Khim. nauki 18 no.3:248-251 '65. (MIRA 18:11)

1. Yerevanskiy gosudarstvennyy universitet, kafedra analiti-
cheskoy khimii. Submitted September 24, 1964.

GASPARYAN, O.B.; MELKONYAN, N.R.; DARBINYAN, O.A.

Ancient ruins near the village of Argavand used as fertilizer [in Armenian with summary in Russian]. Izv.AN Arm.SSR.Biol.i sel'khoz. nauki 4 no.6:555-561 '51. (MLRA 9:8)
(Echmiadzin District--Fertilizers and manures).

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

DARBINIAN, R., inzh.

New compressor design. Prom.Arm. 5 no.11:50-51 N '62.
(MIRA 15:12)
(Eriwan---Compressors)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

DAREINYAN, R.

The VU-6/3,5V compressor. Prom. Arm. 6 no.12:31-33 D 163.
(MIRA 17:2)

1. Yerevanskiy kompressornyy zavod.

AMBINDER, Ya.Ye. [Anbinder, IA.IE.]; SHPAKOVSKIY, N.Ye. [Shpakovs'kyi, N.E.];
DARBINYAN, S.A.; KOMAROV, V.V.; KOMAROVA, T.V.; KOZLOV, Yu.A.; KONOKOTIN,
L.P.; ZEREKIDZE, V.M.; SHULYATITSKIY, S.M. [Shulyatyts'kyi, S.M.];
KHODURSKIY, Ye.A. [Khodurs'kyi, IE.A.]; OBUSHINSKIY, Ye.I. [Obushyns'kyi,
IE.I.]; GVOZDIK, A.A. [Hvozdyk, A.A.]; NIKITINA, M.A.; LUPASHKO, N.F.;
BESKROVNYY, M.N.; TSIMBLER, M.Ye. [TSymbler, M.IE.]; ILYN, A.N.; TOTADZE,
P.M.; ZHIGURS, Kh.Yu.; ZAKREVSKIY, Ye.S. [Zakrevs'kyi, IE.S.];
FEDOROVICH, A.G. [Fedorovych, A.H.]; CHALENKO, D.K.; KHOMUTOV, D.A.;
SKURIKHIN, I.M.; NILOV, V.I.; YEFIMOV, B.N. [IEfimov, B.N.]; KAZANOVSKIY,
V.S. [Kazanovs'kyi, V.S.]; ZOTIKOV, L.S.; KOCHURENKO, M.A.

Soviet certificates of invention. Khar. prom. no. 2:57-59 Ap-Je '65.
(MIRA 18:5)

24.4500

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S/022/61/014/002/006/008
B125/B205

AUTHOR: Darbinyan, S. M.

TITLE: Internal conversion with pair production on a polarized nucleus

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, v. 14, no. 2, 1961, 91-102

TEXT: A study has been made of conversion with electron-positron pair production on a polarized nucleus. In this process, the state of polarization of the initial nucleus is determined by the mean moment $\langle \vec{J} \rangle$. The mean values of polarization of conversion electrons and conversion positrons, and the coefficient of conversion with pair production on a polarized nucleus are calculated without accounting for the effect of the Coulomb field. The mean values for the particles of the pair of the internal conversion following the beta decay were calculated in a previous paper by G. A. Lobov (ZhETF, 39, 3(9), 1960). Explicit expressions for the mean values of polarization are therefore not presented here. The nucleus passes from the state with the quantum numbers I_1, m_1 into a state

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with the quantum numbers I_2, m_2 . If the state of polarization of the initial nucleus is defined by the mean moment $\langle \vec{J} \rangle$, then

$$\rho_{m_1 m_1'} = \frac{1}{2I_1 + 1} \left(\delta_{m_1 m_1'} + \sum_{\mu=-1}^1 \frac{3 \langle J^\mu \rangle}{V I_1 (I_1 + 1)} C_{I_1 m_1' \mu}^{I_1 m_1} \right). \quad (1)$$

holds for the density matrix of the distribution of the projection m_1 of the momentum. $C_{...}^{...}$ denote the Clebsch-Gordan coefficients, and $\langle j^\mu \rangle$ the spherical components of the vector $\langle \vec{j} \rangle$. From (1) it follows that

$$M_{m_1 m_1'} = -i \sqrt{\frac{\alpha}{2\pi}} \sqrt{\frac{L+1}{L(2L+1)(2L+1)}} \frac{\omega^{L+1}}{!!(I_1 m_1 | Q_{LM}^{(1)} | I_1 m_1')!!(B_{LM}^{(1)})_{\mu\nu}} \quad (2),$$

where α symbolizes the fine-structure constant; L and M are the quantum numbers of the momentum and of the projection of the momentum of the photon,

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respectively. $Q_{LM}^{(\lambda)}$ is the operator of the multipole moment of the nucleus, $B_{LM}^{(\lambda)}$ the operator of interaction between an electron or positron and the field of the multipole, and $(B_{LM}^{(\lambda)})_{21}$ is the matrix element of this operator.

$$W_{\text{KONR.}} = \frac{\alpha}{2\pi} \frac{L+1}{L(2L+1)} \frac{\omega^{2(L+1)}}{[(2L+1)!!]^2} \sum_{m_1 m_2 m_1' m_2'} p_{m_1 m_1'} \times \\ \times (I_1 m_1 | Q_{LM}^{(\lambda)} | I_2 m_2)^* (I_1 m_1' | Q_{LM'}^{(\lambda)} | I_2 m_2) (B_{LM}^{(\lambda)})_{21} (B_{LM'}^{(\lambda)})_{21}. \quad (3) \quad (3)$$

holds for the conversion probability. The matrix elements of the multipole moment of the nucleus are given as

$(I_1 m_1 | Q^{(\lambda)} | I_2 m_2) = Q^{(\lambda)} C_{I_2 m_2 LM}^{I_1 m_1}$ (4), where $Q^{(\lambda)}$ do not depend on the m -indices. Neglecting the Coulomb field of the nucleus, the wave functions

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of the electron and positron can be written in the form

$$\psi_{\text{int.}} = N_- \left(\frac{\vec{\sigma} \vec{p}_-}{\epsilon_- + m} U \right) e^{-i \vec{p}_- \cdot \vec{r}}, \quad (5)$$

and

$$\psi_{\text{nos.}} = N_+ \left(\frac{\vec{\sigma} \vec{p}_+}{\epsilon_+ + m} V \right) e^{i \vec{p}_+ \cdot \vec{r}}, \quad (6)$$

(6),

where $N_{\pm} = \sqrt{\frac{\epsilon_{\pm} + m}{2\epsilon_{\pm}}}$ is the normalizing coefficient; ϵ_{\pm} and \vec{p}_{\pm} are

the positron and electron energy and momentum, respectively; $\vec{\sigma} = \begin{pmatrix} 0 & \vec{\sigma} \\ \vec{\sigma} & 0 \end{pmatrix}$ are the Dirac matrices; and U, V are spinors. Substituting (4) - (6) in

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(3) and using (7), the following expression is obtained for the conversion probability:

$$\frac{W_{\text{conv}}}{W_{\text{total}}} = \frac{\alpha(L+1)}{8\pi^2 c L(2L+1)} \frac{\omega^{2(L+1)} |Q^{(1)}|^2 |R_L|^2}{[(2L+1)!]^2} [A^{(1)} + \vec{B}^{(1)} \vec{\xi}^{(-)} + \\ + \vec{C}^{(1)} \vec{\xi}^{(+)} + D^{(1)} \xi^{(-)} \xi^{(+)}] \quad (8)$$

The values of $A^{(\lambda)}$, $\vec{B}^{(\lambda)}$, $\vec{C}^{(\lambda)}$, and $D^{(\lambda)}$ are given below. The resulting mean values of polarization of the electron and positron

$$\langle \sigma_{\text{el}} \rangle = \frac{\vec{B}^{(\lambda)}}{A^{(\lambda)}} \text{ and } \langle \sigma_{\text{pos}} \rangle = \frac{\vec{C}^{(\lambda)}}{A^{(\lambda)}} \quad (9)$$

respectively, are consistent with the values published by G. A. Lobov. The emission probability is given by $W_{\text{emiss}} = \frac{2(L+1)}{L(2L+1)} \frac{\omega^{2L+1}}{[(2L+1)!]^2} |Q^{(\lambda)}|^2$ (10). The following expression is obtained from (8) and (10) for the differential conversion

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coefficient of an electric or magnetic multipole producing an electron of polarization $\hat{\epsilon}^{(-)}$ in the momentum interval $d\vec{p}_-$ and a positron of polarization $\hat{\epsilon}^{(+)}$ in the momentum interval $d\vec{p}_+$:

$$d\beta_L^{(1)} = \frac{\alpha\omega}{16\pi e_{+}z} |R_L|^2 [A^{(1)} + B^{(1)}\hat{\epsilon}^{(-)} + C^{(1)}\hat{\epsilon}^{(+)} + D^{(1)}\hat{\epsilon}^{(-)}\hat{\epsilon}^{(+)}] \times \\ \times \frac{d\vec{p}_+ d\vec{p}_-}{(2\pi)^6} \delta(\omega - \epsilon_+ - \epsilon_-). \quad (11)_L$$

The magnetic transitions ($\Lambda = 0$) are discussed next. The matrix element of the operator of interaction between an electron or positron and the field of a multipole reads

$$(B_{LM}^{(0)})_{\pm} = -N_{\pm}N_{\mp}U^* \left(\vec{\sigma} + \frac{\vec{\sigma} \vec{p}_{\pm}}{\epsilon_{\pm} - m} \right) V \bar{Y}_{LLM} \left(\frac{\vec{q}}{q} \right) R_L. \quad (12) \quad (12),$$

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where \vec{Y}_{LLM} is a spherical vector. From this and

$$\sum p_{m_1 m_1} C_{l_1 m_1 L M}^{l_1 m_1} C_{l_2 m_2 L' M'}^{l_2 m_2} \{ (\vec{a} \vec{Y}_{LLM}(\vec{n})) (\vec{b} \vec{Y}_{LLM'}^*(\vec{n})) + \\ + (\vec{a} \vec{Y}_{LLM'}^*(\vec{n})) (\vec{b} \vec{Y}_{LLM}(\vec{n})) \} = \frac{1}{4\pi} [(\vec{a} \vec{b}) - (\vec{a} \vec{n})(\vec{b} \vec{n})], \quad (13)$$

one obtains the expression

$$A^{(0)} = \epsilon_+ \epsilon_- + m^2 - \frac{1}{q^2} (\vec{p}_+ \vec{q}) (\vec{p}_- \vec{q}).$$

$$\vec{B}^{(0)} = \frac{3r}{2L(L+1)} \frac{((\vec{J}) \vec{q})}{q^2} \left\{ m \omega \vec{q} - \left[(\vec{p}_+ \vec{q}) - \frac{\epsilon_+ - m}{\epsilon_- + m} (\vec{p}_- \vec{q}) \right] \vec{p}_- \right\}.$$

$$\vec{C}^{(0)} = - \frac{3r}{2L(L+1)} \frac{((\vec{J}) \vec{q})}{q^2} \left\{ m \omega \vec{q} - \left[(\vec{p}_- \vec{q}) - \frac{\epsilon_- - m}{\epsilon_+ + m} (\vec{p}_+ \vec{q}) \right] \vec{p}_+ \right\}.$$

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$$\begin{aligned}
 D_{II}^{(0)} = & \left[1 - \frac{\epsilon_+ \epsilon_- + m^2 - \vec{p}_+ \vec{p}_-}{q^2} - \frac{\vec{p}_+ \vec{p}_-}{(\epsilon_+ + m)(\epsilon_- + m)} \right] p_{+I} p_{-I} - (14) \\
 & - \frac{1}{q^2} (\epsilon_+ \epsilon_- + m^2 - \vec{p}_+ \vec{p}_-) p_{+I} p_{-J} + \frac{1}{q^2} \left[-\epsilon_+ \omega + \frac{\epsilon_- - m}{\epsilon_+ + m} (\vec{p}_+ \vec{q}) \right] p_{+I} p_{+I} + \\
 & + \frac{1}{q^2} \left[-\epsilon_+ \omega + \frac{\epsilon_+ - m}{\epsilon_- + m} (\vec{p}_- \vec{q}) \right] p_{-I} p_{-I} + \frac{p_+^2 p_-^2 - (\vec{p}_+ \vec{p}_-)^2}{q^2} \delta_{IJ},
 \end{aligned}$$

for the coefficients. The conversion coefficient is given by

$$\begin{aligned}
 d_{2L}^{(0)}(\epsilon_+) = & \frac{\alpha}{\pi \omega^{2L+1}} \left[a^{(0)} + \frac{r}{2L(L+1)} \frac{((\vec{J}) \vec{\epsilon}^{(-)}) b^{(0)}}{\epsilon_- + m} \right. \\
 & \left. - \frac{r}{2L(L+1)} \frac{((\vec{J}) \vec{\epsilon}^{(+)}) c^{(0)}}{\epsilon_+ + m} + \frac{1}{3} (\vec{\epsilon}^{(+)} \vec{\epsilon}^{(-)}) d^{(0)} \right] d\epsilon_+, \quad (16)
 \end{aligned}$$

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with

$$\begin{aligned}
 & -\frac{\omega}{2} (\epsilon_+ \epsilon_- - p_+ p_- - m^2) (p_+ - p_-)^{2(L-1)} - \frac{\omega}{2} [2(\epsilon_+^2 - Lm^2) - \\
 & - \omega(\epsilon_- - m)] \sum_{n=1}^{L-1} \frac{\omega^{2(L-n-1)}}{n} [(p_+ + p_-)^{2n} - (p_+ - p_-)^{2n}], \\
 \cdot c^{(0)} = & \omega^{2L-1} [2(\epsilon_+^2 - Lm^2) - \omega(\epsilon_+ - m)] \ln \frac{\epsilon_+ \epsilon_- + p_+ p_- + m^2}{m\omega} + \\
 & + \frac{i}{4L} (\omega - 2\epsilon_+ - 2m) [(p_+ + p_-)^2 - (p_+ - p_-)^2] + \\
 & + \frac{\omega}{2} (\epsilon_+ \epsilon_- + p_+ p_- - m^2) (p_+ + p_-)^{2(L-1)} - \\
 & - \frac{\omega}{2} (\epsilon_+ \epsilon_- - p_+ p_- - m^2) (p_+ - p_-)^{2(L-1)} - \frac{\omega}{2} [2(\epsilon_+^2 - Lm^2) -
 \end{aligned}$$

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$$-\omega(\epsilon_+ - m) \sum_{n=1}^{L-1} \frac{\omega^{2(L-n-1)}}{n} [(p_+ + p_-)^{2n} - (p_+ - p_-)^{2n}], \quad (17)$$

$$\begin{aligned} d^{(0)} = & 2\omega^{2(L-1)} \left[\frac{\omega^2}{2} + \epsilon_+ \epsilon_- + Lm^2 + m\omega^2 \frac{Lm - \omega}{(\epsilon_+ + m)(\epsilon_- + m)} \right] \times \\ & \times \ln \frac{\epsilon_+ \epsilon_- + p_+ p_- + m^2}{m\omega} + \frac{1}{4L} \left(1 - 4 \frac{\epsilon_+ \epsilon_- + m^2}{(\epsilon_+ + m)(\epsilon_- + m)} \right) \times \\ & \times [(p_+ + p_-)^{2L} - (p_+ - p_-)^{2L}] - \frac{(p_+ + p_-)^{2(L+1)} - (p_+ - p_-)^{2(L+1)}}{4(L+1)(\epsilon_+ + m)(\epsilon_- + m)} - \\ & - \frac{1}{2} \left(1 + \frac{\omega^2}{(\epsilon_+ + m)(\epsilon_- + m)} \right) [(\epsilon_+ \epsilon_- + p_+ p_- - m^2)(p_+ + p_-)^{2(L-1)} - \end{aligned}$$

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Internal conversion with ...

$$\begin{aligned}
 & - (\epsilon_+ \epsilon_- - p_+ p_- - m^2) (p_+ - p_-)^{2(L-1)}] - \\
 & - \left[\frac{\omega^2}{2} + \epsilon_+ \epsilon_- + Lm^2 + m\omega^2 \frac{Lm - \omega}{(\epsilon_+ + m)(\epsilon_- + m)} \right] \times \\
 & \times \sum_{n=1}^{L-1} \frac{\omega^{2(L-n-1)}}{n} [(p_+ + p_-)^{2n} - (p_+ - p_-)^{2n}].
 \end{aligned} \tag{17}.$$

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B125/B205

Internal conversion with ...

Electric transitions ($\lambda = 1$): The matrix element of the operator $B_{LM}^{(1)}$ reads

$$\begin{aligned} \langle B_{LM}^{(1)} \rangle_{n_1} &= -N_+ N_- \sqrt{\frac{L}{L+1}} U^* \left(\frac{\vec{\sigma} \vec{p}_+}{\epsilon_+ + m} + \frac{\vec{\sigma} \vec{p}_-}{\epsilon_- + m} \right) V Y_{LM}(\vec{n}) R_L - \\ &- N_+ N_- \sqrt{\frac{2L+1}{L+1}} U^* \left(\vec{\sigma} \vec{Y}_{LL-1M}(\vec{n}) + \right. \\ &\quad \left. + \frac{\vec{\sigma} \vec{p}_-}{\epsilon_- + m} \vec{\sigma} \vec{Y}_{LL-1M}(\vec{n}) \frac{\vec{\sigma} \vec{p}_+}{\epsilon_+ + m} \right) V R_{L-1}. \end{aligned} \quad (18)$$

and the spherical harmonics are given by

$$\sum p_{m_1 m_1'} C_{l_1 m_1 L M}^{l_1 m_1} C_{l_2 m_2 L M'}^{l_2 m_2} Y_{LM}(\vec{n}) Y_{LM'}(\vec{n}) = \frac{1}{4\pi},$$

$$\sum p_{m_1 m_1'} C_{l_1 m_1 L M}^{l_1 m_1} C_{l_2 m_2 L M'}^{l_2 m_2} (\vec{Y}_{LL-1M}(\vec{n}) \vec{Y}_{LL-1M'}(\vec{n})) = \frac{1}{4\pi}$$

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B125/B205

Internal conversion with ...

$$\sum p_{m_1 m_1'} C_{J_1 m_1 L M}^{l_1 m_1} C_{J_1 m_1' L M'}^{l_1 m_1'} (Y_{LM}(\vec{n}) \vec{Y}_{LL-1M'}^*(\vec{n}) + Y_{LM'}(\vec{n}) \vec{Y}_{LL-1M}^*(\vec{n})) = \\ = \frac{1}{2\pi} \sqrt{\frac{L}{2L+1}} \vec{n}, \quad (19)$$

$$i \sum p_{m_1 m_1'} C_{J_1 m_1 L M}^{l_1 m_1} C_{J_1 m_1' L M'}^{l_1 m_1'} (Y_{LM}(\vec{n}) \vec{Y}_{LL-1M'}^*(\vec{n}) - Y_{LM'}(\vec{n}) \vec{Y}_{LL-1M}^*(\vec{n})) = \\ = -\frac{3}{8\pi} \frac{r}{\sqrt{L(2L+1)}} [\vec{n} \times (\vec{J})].$$

$$i \sum p_{m_1 m_1'} C_{J_1 m_1 L M}^{l_1 m_1} C_{J_1 m_1' L M'}^{l_1 m_1'} [\vec{Y}_{LL-1M}(\vec{n}) \times \vec{Y}_{LL-1M'}^*(\vec{n})] = \\ = \frac{3}{8\pi} \frac{r}{2L+1} \left((\vec{J}) - \frac{L-1}{L} ((\vec{J}) \vec{n}) \vec{n} \right),$$

$$\sum p_{m_1 m_1'} C_{J_1 m_1 L M}^{l_1 m_1} C_{J_1 m_1' L M'}^{l_1 m_1'} [(\vec{a} \vec{Y}_{LL-1M}(\vec{n})) (\vec{b} \vec{Y}_{LL-1M'}^*(\vec{n})) + \\ + (\vec{a} \vec{Y}_{LL-1M'}^*(\vec{n})) (\vec{b} \vec{Y}_{LL-1M}(\vec{n}))] =$$

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Internal conversion with ...

$$\begin{aligned}
 &= \frac{1}{4\pi(2L+1)} [(L+1)(\vec{a} \cdot \vec{b}) + (L-1)(\vec{a} \cdot \vec{n})(\vec{b} \cdot \vec{n})], \\
 &i \sum_{l, m_1, m_1'} C_{l, m_1, L, M}^{l, m_1} C_{l, m_1, L, M'}^{l, m_1'} [(\vec{a} \cdot \vec{Y}_{LL-1M}(\vec{n})) (\vec{b} \cdot \vec{Y}_{LL-1M'}^*(\vec{n})) - \\
 &\quad - (\vec{a} \cdot \vec{Y}_{LL-1M'}^*(\vec{n})) (\vec{b} \cdot \vec{Y}_{LL-1M}(\vec{n}))] = \\
 &= \frac{3r}{16\pi} \frac{1}{L(2L+1)} [(L+1)((\vec{J})[\vec{a} \cdot \vec{b}]) - (L-1)((\vec{J})[\vec{n}]) (\vec{n} [\vec{a} \cdot \vec{b}])] \quad (19).
 \end{aligned}$$

The differential conversion coefficient is computed in analogy to the magnetic transitions. Thus, one has

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Internal conversion with ...

$$\begin{aligned}
 d\beta_L^{(1)}(\epsilon_+, q) = & \frac{2a}{\pi(L+1)} \frac{q^{2L-1}}{\omega^{2L}(\omega^2 - q^2)^2} \left\{ \frac{(\omega^2 - q^2)^2}{\omega} \left[\frac{L}{2} - \frac{L-1}{4} \frac{\omega^2}{q^2} + \right. \right. \\
 & + \frac{L+1}{2} \frac{\omega^2}{\omega^2 - q^2} - 2L \frac{\epsilon_+ \epsilon_-}{\omega^2 - q^2} + (L+1) \frac{m^2 \omega^2}{(\omega^2 - q^2)^2} + \\
 & + (L-1) \left. \frac{\epsilon_+ \epsilon_- \omega^2}{q^2 (\omega^2 - q^2)} \right] + r(\langle \vec{J} \rangle \vec{\epsilon}^{(-)}) \left[(3\omega - m)(\epsilon_+ \epsilon_- + m^2) + \right. \\
 & + \frac{m^2 \omega^2 (\epsilon_- - \epsilon_+)}{(\epsilon_+ + m)(\epsilon_- + m)} + \frac{1}{L} \frac{m^2 \omega^2}{\epsilon_- + m} + \left(\frac{5}{2} m - \frac{3L-1}{2L} \omega \right. \\
 & \left. - \frac{\epsilon_+ \epsilon_- + m^2}{\epsilon_+ + m} \right) (\omega^2 - q^2) + \frac{L-1}{L} \frac{\omega^2 \epsilon_+ \epsilon_-}{\epsilon_- + m} \frac{\omega^2 - q^2}{q^2} + \frac{(\omega^2 - q^2)^2}{4(\epsilon_+ + m)} - \\
 & \left. \left. - \frac{L-1}{4L} \frac{\omega^2}{\epsilon_- + m} \frac{(\omega^2 - q^2)^2}{q^2} \right] - r(\langle \vec{J} \rangle \vec{\epsilon}^{(+)}) \left[(3\omega - m)(\epsilon_+ \epsilon_- + m^2) + \right. \right. \\
 & \left. \left. + \frac{m^2 \omega^2 (\epsilon_+ - \epsilon_-)}{(\epsilon_+ + m)(\epsilon_- + m)} + \frac{1}{L} \frac{m^2 \omega^2}{\epsilon_+ + m} + \left(\frac{5}{2} m - \frac{3L-1}{2L} \omega \right. \right. \\
 & \left. \left. - \frac{\epsilon_+ \epsilon_- + m^2}{\epsilon_+ + m} \right) (\omega^2 - q^2) + \frac{L-1}{L} \frac{\omega^2 \epsilon_+ \epsilon_-}{\epsilon_+ + m} \frac{\omega^2 - q^2}{q^2} + \frac{(\omega^2 - q^2)^2}{4(\epsilon_+ + m)} - \\
 & \left. \left. - \frac{L-1}{4L} \frac{\omega^2}{\epsilon_+ + m} \frac{(\omega^2 - q^2)^2}{q^2} \right] \right\}
 \end{aligned}$$

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Internal conversion with ...

$$\begin{aligned}
 & - \frac{\epsilon_+ \epsilon_- + m^2}{\epsilon_- + m} \Big) (\omega^2 - q^2) + \frac{L-1}{L} \frac{\omega^2 \epsilon_+ \epsilon_-}{\epsilon_+ + m} \frac{\omega^2 - q^2}{q^2} + \frac{(\omega^2 - q^2)^2}{4(\epsilon_- + m)} - \\
 & - \frac{L-1}{4L} \frac{\omega^2}{\epsilon_+ + m} \frac{(\omega^2 - q^2)^2}{q^2} \Big] + \frac{2}{3} (\bar{\xi}^{(+)} - \bar{\xi}^{(-)}) \frac{L}{\omega} \left[\frac{L+1}{L} m^2 \omega^2 \times \right. \\
 & \times \frac{m\omega + m^2 + \epsilon_+ \epsilon_- - \omega^2}{(\epsilon_+ + m)(\epsilon_- + m)} + \left(m^2 - \epsilon_+ \epsilon_- + \frac{L+1}{2L} \omega^2 \frac{\epsilon_+ \epsilon_- - m\omega + m^2}{(\epsilon_+ + m)(\epsilon_- + m)} \right) \times \\
 & \times (\omega^2 - q^2) - \frac{L-1}{L} m^2 \omega^2 \frac{\omega^2 - q^2}{q^2} + \frac{1}{2} \left(1 - \frac{L+1}{2L} \frac{\omega^2}{(\epsilon_+ + m)(\epsilon_- + m)} \right) \times \\
 & \times (\omega^2 - q^2)^2 + \left. \left(\epsilon_+ \epsilon_- + m^2 - \frac{L+1}{4L} \omega^2 \right) \frac{(\omega^2 - q^2)^2}{q^2} \right] \Big\} dq d\epsilon_+. \quad (21)
 \end{aligned}$$

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Internal conversion with ...

and, after integration over dq,

$$\begin{aligned} d_{PL}^{(1)}(\epsilon_+) = & \frac{\alpha}{\pi(0^{2L+1})} \left[a^{(1)} + \frac{r}{2(L+1)} (\langle \vec{j} \rangle \vec{\xi}^{(-)}) b^{(1)} - \right. \\ & \left. - \frac{r}{2(L+1)} (\langle \vec{j} \rangle \vec{\xi}^{(+)} c^{(1)} + \frac{L}{3(L+1)} (\vec{\xi}^{(+)} \vec{\xi}^{(-)}) d^{(1)}) \right] d\epsilon_+, \quad (22) \end{aligned}$$

with

$$\begin{aligned} a^{(1)} = & \frac{1}{2(L+1)} [(p_+ + p_-)^{2L} - (p_+ - p_-)^{2L}] - \left(\frac{(\epsilon_+ - \epsilon_-)^2}{4(L+1)} + m^2 \right) \times \\ & \times [(p_+ + p_-)^{2(L-1)} - (p_+ - p_-)^{2(L-1)}] + \frac{m^2}{2} (\epsilon_+ \epsilon_- + p_+ p_- - m^2) \times \\ & \times (p_+ + p_-)^{2(L-2)} - \frac{m^2}{2} (\epsilon_+ \epsilon_- - p_+ p_- - m^2) (p_+ - p_-)^{2(L-2)} + \\ & + m^{2(L-1)} (\epsilon_+^2 + \epsilon_-^2 - 2(L-1)m^2) \left\{ \ln \frac{-\epsilon_+ \epsilon_- + p_+ p_- + m^2}{m \omega} - \right. \\ & \left. - \frac{1}{2} \sum_{n=1}^{L-1} \frac{\omega^{-2n}}{n} [(p_+ + p_-)^{2n} - (p_+ - p_-)^{2n}] \right\} \end{aligned}$$

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Internal conversion with ...

$$\begin{aligned}
 b^{(1)} = & \frac{\omega}{4L(\epsilon_- + m)} \left[(p_+ + p_-)^{2L} - (p_+ - p_-)^{2L} \right] + \\
 & + \omega \left[(m - 3\omega) \frac{\epsilon_+ \epsilon_- + m^2}{\omega^2} - m^2 \frac{\epsilon_- - \epsilon_+}{(\epsilon_+ + m)(\epsilon_- + m)} + \right. \\
 & + \frac{1}{L} \frac{m^2}{\epsilon_- + m} + \frac{1}{L} \frac{\epsilon_+ \epsilon_-}{\epsilon_- + m} - \frac{1}{4L} \frac{\omega^2}{\epsilon_- + m} \left. \right] \left[(p_+ + p_-)^{2(L-1)} - \right. \\
 & \left. - (p_+ - p_-)^{2(L-1)} \right] + \frac{\omega}{2m^2} \left[(3\omega - m)(\epsilon_+ \epsilon_- + m^2) + \right. \\
 & + m^2 \omega^2 \frac{\epsilon_- - \epsilon_+}{(\epsilon_+ + m)(\epsilon_- + m)} + \frac{1}{L} \frac{m^2 \omega^2}{\epsilon_- + m} \left. \right] \left[(\epsilon_- \epsilon_+ + p_+ p_- - m^2) \times \right. \\
 & \times (p_+ + p_-)^{2(L-2)} - (\epsilon_+ \epsilon_- - p_+ p_- - m^2) (p_+ - p_-)^{2(L-2)} \left. \right] - \\
 & - 2(L-1) \omega^{2L-1} \times \\
 & \times \left[(3\omega - m) \frac{\epsilon_+ \epsilon_- + m^2}{\omega^2} + m^2 \frac{\epsilon_- - \epsilon_+}{(\epsilon_+ + m)(\epsilon_- + m)} + \frac{1}{L} \frac{m^2}{\epsilon_- + m} - \right. \\
 & \left. - \frac{5m}{2(L-1)} + \frac{3L-1}{2L(L-1)} + \frac{\epsilon_+ \epsilon_- + m^2}{(L-1)(\epsilon_- + m)} - \frac{1}{L} \frac{\epsilon_+ \epsilon_-}{\epsilon_- + m} \right] \times
 \end{aligned} \tag{23}$$

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Internal conversion with ...

$$\begin{aligned}
 & \times \left\{ \ln \frac{\epsilon_+ \epsilon_- + p_+ p_- + m^2}{m \omega} - \frac{1}{2} \sum_{n=1}^{L-1} \frac{\omega^{-2n}}{n} [(p_+ + p_-)^{2n} - (p_+ - p_-)^{2n}] \right\}, \\
 C^{(1)} = & \frac{\omega}{4L(\epsilon_+ + m)} [(p_+ + p_-)^{2L} - (p_+ - p_-)^{2L}] + \\
 & + \omega \left[(m - 3\omega) \frac{\epsilon_+ \epsilon_- + m^2}{m^2} - m^2 \frac{\epsilon_+ - \epsilon_-}{(\epsilon_+ + m)(\epsilon_- + m)} + \frac{1}{L} \frac{m^2}{\epsilon_+ + m} + \right. \\
 & + \frac{1}{L} \frac{\epsilon_+ \epsilon_-}{\epsilon_+ + m} - \frac{1}{4L} \frac{\omega^2}{\epsilon_+ + m} \left. \right] [(p_+ + p_-)^{2(L-1)} - (p_+ - p_-)^{2(L-1)}] + \\
 & + \frac{\omega}{2m^2} \left[(3\omega - m) (\epsilon_+ \epsilon_- + m^2) + m^2 \omega^2 \frac{\epsilon_+ - \epsilon_-}{(\epsilon_+ + m)(\epsilon_- + m)} + \right. \\
 & \left. + \frac{1}{L} \frac{m^2 \omega^2}{\epsilon_+ + m} \right] [(\epsilon_+ \epsilon_- + p_+ p_- - m^2) (p_+ + p_-)^{2(L-2)} - \\
 & - (\epsilon_+ \epsilon_- - p_+ p_- - m^2) (p_+ - p_-)^{2(L-2)}] - 2(L-1)m^{2L-1} \times
 \end{aligned}$$

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Internal conversion with ...

$$\begin{aligned} & \times \left[(3\omega - m) \frac{\epsilon_+ \epsilon_- + m^2}{\omega^3} + m^2 \frac{\epsilon_+ - \epsilon_-}{(\epsilon_+ + m)(\epsilon_- + m)} + \frac{1}{L} \frac{m^2}{\epsilon_+ + m} - \right. \\ & - \frac{5m}{2(L-1)} + \frac{3L-1}{2L(L-1)} \omega + \frac{\epsilon_+ \epsilon_- + m^2}{(L-1)(\epsilon_+ + m)} + \frac{\epsilon_+ \epsilon_-}{L(\epsilon_+ + m)} \Big] \times \\ & \times \left\{ \ln \frac{\epsilon_+ \epsilon_- + p_+ p_- + m^2}{m\omega} - \frac{1}{2} \sum_{n=1}^{L-1} \frac{\omega^{-2n}}{n} [(p_+ + p_-)^{2n} - (p_+ - p_-)^{2n}] \right\}. \end{aligned}$$

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Internal conversion with ...

$$\begin{aligned}
 d^{(1)} = & \left[\frac{\epsilon_+ \epsilon_- - (L-2)m^2}{L-1} + \frac{L+1}{L} \frac{m^2 \omega^2}{(\epsilon_+ + m)(\epsilon_- + m)} - \right. \\
 & \left. - \frac{L+1}{4L(L-1)} \omega^2 \right] [(p_+ + p_-)^{2(L-1)} - (p_+ - p_-)^{2(L-1)}] + \\
 & + \frac{L+1}{L} \omega^2 \frac{m\omega + m^2 + \epsilon_+ \epsilon_- - \omega^2}{(\epsilon_+ + m)(\epsilon_- + m)} [(e_+ \epsilon_- + p_+ p_- - m^2)(p_+ + p_-)^{2(L-2)} - \\
 & - (e_+ \epsilon_- - p_+ p_- - m^2)(p_+ - p_-)^{2(L-2)}] + \\
 & + \frac{1}{2L} \left(1 - \frac{L+1}{L} \frac{\omega^2}{(\epsilon_+ + m)(\epsilon_- + m)} \right) [(p_+ + p_-)^{2L} - (p_+ - p_-)^{2L}] - \\
 & - 2\omega^{2(L-1)} \frac{L+1}{L} \left[(L-1)m^2 - \frac{\omega^2}{2} - \frac{(L-1)m - \omega}{(\epsilon_+ + m)(\epsilon_- + m)} m\omega^2 - \right. \\
 & \quad \left. \right]
 \end{aligned}$$

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Internal conversion with ...

$$\begin{aligned}
 & - \frac{m^2 - L \epsilon_+ \epsilon_-}{L + 1} \left[\ln \frac{\epsilon_+ \epsilon_- + p_+ p_- + m^2}{m^2} - \right. \\
 & \left. - \frac{1}{2} \sum_{n=1}^{L-1} \frac{\omega^{-2n}}{n} [(p_+ + p_-)^{2n} - (p_+ - p_-)^{2n}] \right]. \quad (23).
 \end{aligned}$$

The result obtained is particularized for $L = 1$. Professor V. B. Berestetskiy is thanked for assistance. There are 4 Soviet-bloc references.

ASSOCIATION: Fizicheskiy institut AN Armyanskoy SSR (Institute of Physics, AS Armyanskaya SSR)

SUBMITTED: August 18, 1960

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S/022/63/016/001/002/003
D218/D307

AUTHOR:

Darbinyan, S.M.

TITLE:

Polarization of particles emitted as a result of internal conversion following β -decay

PERIODICAL:

Akademiya nauk Armyanskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 16, no. 1, 1963, 105-110

TEXT:

It is assumed that the β -decay is due to a first order forbidden β -transition so that the density matrix is given by an expression of the form

$$\rho_{m_2 m'_2} = \sum_{l=0}^3 \sum_{m=-l}^l d_l C_{l m' m}^{l m'} Y_{l m}(\vec{n}), \quad (2)$$

This expression holds for an initially unpolarized nucleus when the direction of the emission to the neutrino is not recorded. Expressions are obtained for the polarization of conversion electrons in the case of magnetic and electric transitions, and also in the case

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Polarization of particles ...

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of conversion with pair production. In the latter case, the Coulomb field of the difference is neglected and the wave functions of the electrons and positron are taken in the form of plane waves.

SUBMITTED: July 10, 1962

Card 2/2

DARBINYAN, S.S.

Supporting capacity of eccentrically compressed short steel bars.
Dokl.AN Arm.SSR 22 no.3:97-100 '56. (MLRA 9:8)

1. Institut stroitel'nykh materialov i scoruzheniy Akademii nauk
Armyanskoy SSR. Predstavлено A.G. Nazarovym.
(Girders) (Strains and stresses)

DARBINYAN, S.S.

Vibration of a system with one degree of freedom taking elastic
and plastic deformation into account. Izv. Akad. Nauk. Arm. SSR. Ser. tekhn.
nauk. 12 no.1:3-18 '59. (MIRA 12:4)

1. Institut stroymaterialov i sooruzheniy Ministerstva stroitel'-
stva Armyanskoy SSR.
(Vibration)

DARRINIAN, S.S.

Shear vibrations in a system with two degrees of freedom with consideration given to elastic and plastic deformations. Dokl. AN Arm. SSR 29 no. 2:59-63 '59. (MIRA 12:11)

1. Institut stroitel'nykh materialov i scoruzheniy. Predstavлено членом-корреспондентом AN Armyanskoy SSR A.G. Nazarovym.
(Vibrations)

DARBINYAN, S.S.

Theory of torsion in heterogeneous rods composed of various
materials. Trudy Arm. inst. stroimat. i soor. no.1:41-52 '59.
(MIRA 14:12)

(Torsion)
(Elastic rods and wires)

S/173/60/013/001/001/005
A104/A029

AUTHOR: Darbinyan, S.S.

TITLE: Shear Vibrations of Systems With Multiple Degrees of Freedom Beyond the Elastic Limit

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR, Seriya tekhnicheskikh nauk, 1960, Vol. 13, No. 1, pp. 21-27

TEXT: In previous papers (Refs. 1 and 2) the author dealt with seismic shear vibrations of systems with one and two degrees of freedom. In this article vibrations with multiple degrees of freedom are described, taking into consideration the seismic stability of elasto-plastic deformations. The problem was solved by a model of the system using an imponderable rod fixed on one end with longitudinally concentrated masses based on the method described in Refs. 3 and 4. It is assumed that the system is subjected to seismic vibrations of the soil which vary according to the law $x_0(t)$. According to the equilibrium of the mass m_k the differential coefficient of the movement is obtained by an equation which makes allowance for the internal force between the masses. The deformation of individual sectors is determined by Equation (2) in which $x_0 = 0$. The elasto-plastic properties of the material characterized by the load strain diagram (Fig. 2)

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A104, A029

Shear Vibrations of Systems With Multiple Degrees of Freedom Beyond the Elastic Limit

and the dependence of the strain on the deformation is determined by Equation (3) developed by V.V. Moskvitin (Refs. 4 and 5) $T = \alpha\beta\lambda T_T + (\beta-1)(\gamma^0 + \alpha\gamma_T) G\lambda + \Psi G\gamma$, where λ is the hardening coefficient. T_T and γ_T are the strain and the deformation characterizing the yield point. The integration of the differential movement equations (4) is performed according to zones shown in Figure 2 and based on continuity of the displacement and velocity on zone border points 1, 2, 3, 4, 5 and 6. Based on the results obtained by Equations (5) - (8) the author determines by Equations (9) and (10) the displacement factor and horizontal seismic powers for all types of deformation by applying the condition of conjugation. Maximum seismic values, displacements and crippling deformation values can be determined by the same equations. The results can be also applied when the mass m_k is affected by the outside force $q_k(t)$, in which case the solution is $m_k x''_0 = q_k(t)$.

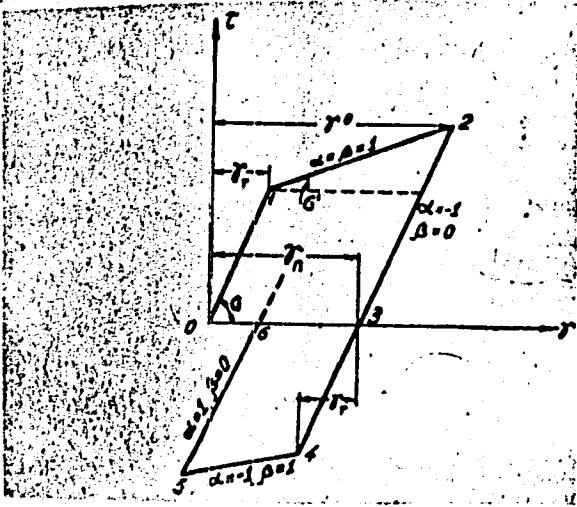
ASSOCIATION: Institut stroymaterialov i sooruzheniy Gosstroya Armyanskoy SSR
(Institute of Building Materials and Equipment of the Gosstroy
of the Armyanskaya SSR).

SUBMITTED: October 20, 1959
Card 2/3

S/173/60/013/001/001/005
A104/A029

Shear Vibrations of Systems With Multiple Degrees of Freedom Beyond the Elastic Limit

Figure 2:



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11 th design

DARBINYAN, S. S., CAND TECH SCI, ON ~~COMMISSION~~ OF IN-
STALLATIONS FOR SEISMIC REACTIONS, ~~TAKING INTO ACCOUNT~~
ELASTICALLY PLASTIC DEFORMATIONS. YEREVAN, 1960. (Committee
of COUNCIL OF MINISTERS ARSSR FOR HIGHER AND SEC SPEC ED.
YEREVAN POLYTECH INST IN K. MARX). (KL, 2-61, 208).

-127-

GALANKIN, N.K., DARBINYAN, T.M.

Anastomosis between the superior vena cava and the right pulmonary artery
[with summary in English]. Exper.khir. 1 no.3:54-57 My-Je '56
(MIRA 11:10)

1. Iz Instituta khirurgii imeni A.V. Vishnevskogo (dir. chlen-korrespondent AMN SSSR prof. A.A. Vishnevskiy.) AMN SSSR.

(VENAE CAVA, surg.
exper. anastomosis between superior vena cava & right
pulm. artery in dogs (Rus))
(ARTERIES, PULMONARY, surg.
same (Rus))

DARBINIAN, T. M.

DARBINIAN, T. M.

An improved endotracheal tube [with summary in English] Eksper.
(MLBA 10:2)
khir. 1 no.5:45-47 8-0 '56.

1. Iz Instituta khirurgii imeni A. V. Vishnevskogo (dir. - chlen-
korrespondent AMN SSSR prof. A. A. Vishnevskiy) AMN SSSR.
(ANESTHESIA, ENDOTRACHEAL, apar. and instruments
improved endotracheal tube).
P

DARBINYAN, T. M. Cand Med Sci -- (diss) "Operating Techniques and
the ~~XXIV~~ Study of the Hemodynamics During Anastomosis Between
the Peripheral Ends of Vena Cava Superior and the Dextral Pulmonary
Artery (Experimental Study)." Mos, 1957. 9 pp 20 cm. (Academy of
Medical Sciences USSR), 200 copies (KL, 25-57, 118)

- 128 -

EXCERPTA MEDICA Sec 9 Vol 13/2 Surgery Feb 59
III. ANASTOMOSIS BETWEEN THE SUPERIOR VENA CAVA AND THE
RIGHT BRANCH OF PULMONARY ARTERY AND ITS HAEMODYNAMICS
(Russian text) - Darbinian T. M. - EKSPER. KHIR. 1957, 2(23-32)
Galankin proposed in 1955 anastomosis between the vena cava superior and the
right pulmonary artery for surgical treatment of Fallot's tetralogy and tricuspid
atresia. Meschakkin, Vishnevskiy and Galankin performed this operation in 1956
in patients with Fallot's tetralogy and tricuspid atresia. The anastomosis has the

initial surgery in A.V. Vishnevskiy
HMS USSR

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nastomosis. The
exposed vein, and then
the clamp on the c
between the pulmonary
is ligated. The possibility
being studied. Arterial blood
(normal value 20-50 mm. H₂O),
quite to initial values. The venous
almonary artery and the anastomosis are
pulmonary vein.

Mesjan - Prague (XVIII, 9)

EXCERPTA MEDICA Sec 9 Vol 13/2 Surgery Feb 59

1116. ANASTOMOSIS BETWEEN THE SUPERIOR VENA CAVA AND THE
RIGHT BRANCH OF PULMONARY ARTERY AND ITS HAEMODYNAMICS
(Russian text) - Darbinian T. M. - EKSPER. KHIR. 1957, 2(23-32)
Graphs 5|Tables 1 Illus. 4

Galankin proposed in 1955 anastomosis between the vena cava superior and the right pulmonary artery for surgical treatment of Fallot's tetralogy and tricuspid atresia. Meschakin, Vishnevsky and Galankin performed this operation in 1956 in patients with Fallot's tetralogy and tricuspid atresia. The anastomosis has the

*Inot. Surgery in A.V. Vishnevskiy
AMS USSR*

1116

advantage that there is no backward circulation of blood. The blood of the whole upper half of the body passes the right lung, omitting the right ventricle. Such a condition is especially advantageous in Fallot's tetralogy. Anastomosis is of the types 1 (end-to-end anastomosis) and 2 (end-to-side anastomosis). The operation was performed in experiments on dogs 46 times. Technique of operation (in experiments): A thoracotomy is made in the second intercostal space with resection of the third rib. Ad 1. The pulmonary artery is exposed right up to the pericardium and is ligated as near as possible to the pericardium. Distal to the ligation a clamp is placed and between the clamp and the ligation the pulmonary artery is dissected. Then the v. c. sup. is exposed as far as the pericardium, ligated and dissected. The v. c. sup. is connected to the pulmonary artery by means of Donetsky's ring, which is inserted on the end of the v. c. sup. The operation was executed with this technique 33 times and a thrombosis was never observed in the anastomosis. The clamp on the pulmonary artery is released first and after it the clamp on the v. c. sup. The operation lasts 30-40 min. Ad 2. The v. c. sup. is exposed first and then the pulmonary artery. End-to-side anastomosis is made between the pulmonary artery and the v. c. sup., which is distal to the anastomosis ligated. The possibility of the use of the Donetsky's ring in this technique is being studied. Arterial blood pressure does not change by creating the anastomosis. Ligation of the v. c. sup. raises the venous pressure to 400-600 mm. H₂O (normal value 20-50 mm. H₂O). Anastomosis causes a fall in venous pressure quite to initial values. The venous pressure values fell to normal after a month. The diameter of the v. c. sup. diminished to a third. Ligation of the pulmonary artery and the anastomosis are of no influence on the pressure in the pulmonary vein.

Měšťan - Prague (XVIII, 9)

SMELOVSKIY, S.I.; DARBINIAN, T.M.; KRYMSKIY, L.D.

Method of suturing the stump of the left auricular appendix during
commissurotomy [with summary in English]. *Eksper.khir.* 2 no.3:22-26
My-Je '57. (MIRA 10:10)

1. Iz Instituta khirurgii imeni A.V.Vishnevskogo (dir. - deyatel'nyy chlen AMN SSSR prof. A.A.Vishnevskiy) AMN SSSR.
(COMMISSUROTOMY

suturing left auric. appendix stump, method)

DARBINTAN, T.M.

The function of anastomosis of the superior vena cava with the pulmonary artery; by angiographic study [with summary in English]
Khirurgiia 33 no.8:68-71 Ag '57. (MIRA 11:4)

1. Iz rentgenologicheskogo otdeleniya (zav.-prof. P.N. Mazayev)
Instituta khirurgii im. A.V. Vishnevskogo (dir.-deystvitel'nyy chlen
AMN SSSR zasluzhennyy deyatel' nauki prof. A.A. Vishnevskiy) AMN SSSR.
(VENA CAVA, surg.
exper. anastomosis between superior vena cava & pulm. artery,
angiocardiographic observation of funct. of anastomosis)
(ARTERIES, PULMONARY, surg.
exper., anastomosis with superior vena cava, angiocardiographic
observation of funct. of anastomosis)
(ANGIOCARDIOGRAPHY
in funct. study of exper. anastomosis of superior vena
cava & pulm. artery)

~~DARBYAN T. M.~~ EXCERPTA MEDICA Sec 18 Vol. 2/1 Cardiovas. dis. Jan 58

300. DARBINIAN T. M. Complications arising when anastomosing superior vena cava to right pulmonary artery. Experimental data (Russian text) Vestn. Khir. 1957, 78/5 (52-55 and 158) Graphs 3

Forty-six dogs were used for the investigation. The main complications were as follows: (1) cardiac tamponade resulting from haemorrhage of the intrapericardial portion of the right pulmonary artery; (2) haemorrhage from stumps of right pulmonary artery and superior vena cava in cases of ligature slackening; (3) air embolus when the azygos vein is wounded. The main cause of postanastomotic exudative pleuritis being superior vena cava blood stasis in the first postoperative days, this complication should be anticipated and prevented by eliminating all sources of thrombosis (residual air and blood in the pleural cavity) and by restoring the respiratory function of the right lung. (XVIII, 9)

BURAKOVSKIY, V.I., DARBINIAN, T.M., KHARINAS, A.S.

Intracardiac surgery under direct vision with exclusion of the heart from circulation under hypothermia [with summary in English]. Eksper.
khir. 3 no. 3:48-49 My-Je '58 (MIRA 11:8)

1. Iz Instituta khirurgii imeni A.V. Vishnevskogo (dir. deyatvitel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR.
(HEART, artif.

extracorporeal circ. with hypothermia in open heart surg.
(Rus))

(HYPOTHERMIA,

open in heart surg. with extracorporeal circ. (Rus))

DARBINYAN, T.M., RUBETSKOY, L.S., KLEMENOVA, Ye.S.

A rare anomaly of development of the heart and large vessels.
[with summary in English]. Ekspер.khir.3 no.4:49-52 Jl-Ag '58
(MIRA 11:9)

1. Iz Instituta khirurgii imeni A.V. Vishnevskogo (dir. - deyatel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy).
(CARDIOVASCULAR DEFECTS, CONGENITAL, case reports
multiple cardiovasc. abnorm (Rus))

EXCERPTA MEDICA Sec 9 Vol 13/6 Surgery June 59

3242. TREATMENT AND PROPHYLAXIS OF ACUTE CARDIOVASCULAR INSUFFICIENCY DURING MITRAL COMMISSUROTOMY (Russian text) - Smelovsky S. I., Darbinyan T. M. and Panova Yu. M. - KHIRURGIYA 1958, 8 (21-28) Graphs 2

Acute cardiovascular insufficiency requiring intra-arterial blood transfusion occurred in 46 of 135 patients during mitral commissurotomy. The treatment was successful in all the cases. Acute cardiovascular insufficiency is mainly caused by the operation itself and by haemorrhage from the left auricular appendage. Besides, the weakness of the left ventricle adapted to minimal blood filling also plays a certain role. After dilatation of the mitral orifice this weakness of the left ventricle may give rise to acute insufficiency. Prophylactic intra-arterial blood transfusion with assisted respiration is recommended for prevention of acute cardiovascular insufficiency. Employment of this method (furnishing continuous intra-arterial blood transfusion) with adrenaline during commissurotomy completely prevents acute cardiovascular insufficiency. The best site for transfusion is the posterior tibial artery. At times intra-arterial blood transfusion is followed by pains along the main blood vessels of the lower extremity and paresis of the peroneal nerve. Appearance of acute cardiovascular insufficiency in 40% of cases of mitral commissurotomy justifies the recommendation of prophylactic intra-arterial blood transfusion in all cases of surgical treatment of stenosis of the left venous orifice.

(LX, 6, 18)

DARBINYAN, T.M.

Use of dipalatin in surgical anesthesia in patients with heart
defects. Akt. vop. obzvod. no.2:120-126 '59. (MIRA 14:5)

1. Iz instituta khirurgii imeni A.V.Vishnevskogo AMN SSSR (direktor
deystvitel'nyy chlen AMN SSSR prof. A.A.Vishnevskiy).
(DIPALACIN) (HEART—ABNORMALITIES AND DEFORMITIES)
(ANESTHESIA)

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CIA-RDP86-00513R000509720003-5

DARBINYAN, T.M.; MAZAYEV, P.N. (Moskva)

Study of collateral blood circulation in the system of the
superior vena cava. Mksp.khir. 4 no.3:41-42 My-Je '59.
(MIRA 12:8)

(VENA CAVA, dis.
obstruct. of superior vena cava, collateral
blood circ. in dogs (Rus))

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

DARBINYAN, T.M., kand.med.nauk

Selection of an anesthetic method for surgery in tetralogy of Fallot [with summary in English]. Khirurgia 35 no.1:113-118 (MITA 12:2) Ja '59.

1. Iz Instituta khirurgii imeni A.V. Vishnevskogo (dir. - deyaviteľnyy chlen AMN SSSR prof. A.A. Vichnevskiy) AMN SSSR.
(TETRALOGY OF FALLOT, surg.)

(anasth., selection (Rus))
(ANESTHESIA,
in tetralogy of Fallot, selection (Rus))

DARBINYAN, T. M.

DARBINIAN, T.M.

Hypothermia in surgical therapy of patients with Fallot's tetralogy.
Roshl. chir. 38 no.9:577-582 S '59

1. Ustav chirurgie A.V. Visnevskogo AMV SSSR, reeditel prof. A.A.
Visnevskij, olen AMV SSSR.
(TETRALOGY OF FALLOT, surg.)
(HYPOTHERMIA INDUCED)

ZHAROV, I.S., zasl. deytatel' nauki, prof., otv. red.; KOLESNIKOV,
S.A., prof., red.; NAPALKOV, P.N., zasl. deyatel' nauki,
prof., red.; ROVNOV, A.S., prof., red.; DAMIR, Ye.A., kand.
med.nauk, red.; ~~DARBINYAN, T.M.~~, kand. med.nauk, red.;
SERGEYEV, V.M., kand. med. nauk, red.; UVAROV, B.S., kand. med.
nauk, red.; LUKUMSKIY, G.I., kand. med.nauk, red.; BUKOVSKAYA,
N.A., tekhn. red.

[Transactions of the First Symposium on Anesthesiology] Trudy
Simpoziuma po anestesiologii. 1st, Moscow, 1960. (MIRA 16:9)

1. Simposium po anestesiologii. 1st, Moscow, 1960.
(ANESTHESIOLOGY--CONGRESSES)

DARBINYAN, T.M. (Moskva, Lysinovskaya ul., d.48/50, krop.10.kv.540)

Compensatory function of the bronchial arteries in "blue" type
congenital heart disease with disorders of the lesser circula-
tion. Grud.khir. 2 no.2:32-35 Mr.Ap'60. (MIRA 16:7)

1. Iz Instituta khirurgii imeni A.V. Vishnevskogo (dir.-deystvitel'-
nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR.
(BRONCHI—BLOOD VESSELS)
(HEART—ABNORMALITIES AND DEFORMITIES)
(BLOOD—CIRCULATION, DISORDERS OF)

DARBINYAN, T.M.

Anesthesia and the conduct of the operative period in patients undergoing surgery on the "dry" heart under hypothermia. Eksper.
khir. 5 no. 3:8-14 My-Je '60. (MIRA 14:1)
(HEART-SURGERY) (HYPOTHERMIA)

DARBINYAN, T.M., kand.meditinskikh nauk

Indications, contraindications, and hazards of hibernation
and neuroplegia in surgery. Voen.-med. zhur. no. 6:54-58
Je '60. (MIRA 13:7)
(ARTIFICIAL HIBERNATION) (AUTONAMIC DRUGS)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

SARKISOV, D.S.; DARBINYAN, T.M.; TSUKERMAN, B.M.; KRYMSKIY, L.D.

Production of chronic cardiac aneurysms in rabbits. Eksper. khir.
5 nos. 2853-54 Mr-Ap '60. (MIRA 14:1)
(ANEURYSMS) (CORONARY HEART DISEASE)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

SARKISOV, D.S.; DARBINIAN, T.M.; MAZAYEV, P.N.; KRYMSKIY, L.D.; TSUKERMAN,
B.M.

Method inducing graduated stenosis of the aorta and its correction
for studying the reversibility of hypertrophy of the myocardium.
Eksper. khir. 5 no. 5:11-17 '60. (MIRA 14:1)
(AORTA—DISEASES)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

VISHNEVSKIY, A.A.; DARBINYAN, T.M.; PORTNOY, V.F.; PROMTOVA, T.N.; KHARNAS, S.Sh.

Coronary and carotid perfusion of the heart from the blood circulation in hypothermia. Eksper. khir. 5 no:6:6-16 N-D '60.'

(MIRA 14:2)

(PERFUSION PUMP (HEART))

(HYPOTHERMIA)

DARBINIAN, T.M.; MAYSIUK, A.P.; DONETSKIY, D.A.

Evaluation fo the vascular suture technic in the construction of
caval-pulmonary anastomosis. Vest.khir. 85 no.9:39-44 S '60.

(MIRA 13:11)

1. Iz Instituta khirurgii im. A.V. Vishnevskogo (dir. - prof.
A.A. Vishnevskiy) AMN SSSR.
(VENA CAVA—SURGERY) (PULMONARY ARTERY—SURGERY)

VINITSKAYA, R. S., (Moskva, Zatsepskiy val, d. 5, kv. 89); DARBINYAN, T. M.

Oxygen saturation of the blood in tetralogy of Fallot during
surgery for suturing an intra-arterial anastomosis in hypothermia.
Grud. khir. no. 5:42-48 '61. (MIRA 15:2)

1. Iz laboratorii fiziologii (zav. - prof. L. L. Shik) Instituta
khirurgii imeni A. V. Vishnenvskogo (dir. - deyatvitel'nyy chlen
AMN SSSR prof. A. A. Vinshevskiy)

(BLOOD—OXYGEN CONTENT) (TETRALOGY OF FALLOT)
(HYPOTHERMIA) (ARTERIES—SURGERY)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

DARBINYAN, T.M., kand.med.nauk

Use of muscle relaxants in anesthesiology. Voen.-med.zhur. no.9:
39-43 S '61. (MIRA 15:10)
(MUSCLE RELAXANTS) (ANESTHESIOLOGY)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

DARBINYAN, T.M.; PROTNOY, V.F.

Deep hypothermia. Eksp.khir.i anest. 6 no.1:52-61 '61.
(MTRA 14:10)

(HYPOTHERMIA)

(HEART--SURGERY)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

VISHNEVSKIY, A.A.; DARBINYAN, T.M.; KUDRYAVTSEVA, A.N.; KHARNAS, S.Sh.

Hypothermia and extracorporeal blood circulation in heart surgery.
Eksp.khir.i anest. 6 no.2:3-14 '61. (MIRA 14:10)
(PERFUSION PUMP (HEART)) (HYPOTHERMIA)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

VISHNEVSKIY, A.A.; DARBINIAN, T.M.; PROTNOY, V.F.; KHARNAS, S.Sh.

Isolated deep hypothermia of the heart as a method of artificial
cardioplegia. Eksp.khir.i anest. 6 no.3:3-12 '61.

(HEART—SURGERY) (PERFUSION PUMP (HEART))
(HYPOTHERMIA) (MIRA 14:10)

DARBINYAN, T.M.

Combined induction anesthesia for patients with congenital heart defects treated under hypothermia. Eksp. khir. i anest. 6 no.5:14-22 S-0 '61. (MIRA 15:3)

1. Iz instituta khirurgii imeni A.V. Vishnevskogo (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR.
(HEART—SURGERY)
(HYPOTHERMIA)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

DARBINYAN, T.M.

Introductory cyclopropane anesthesia during operations under conditions
of hypothermia and artificial blood circulation. Vest. AMN SSSR 16
no.8:42-46 '61. (MIRA 14:12)

1. Institut Khirurgii imeni Vishnevskogo AMN SSSR.
(CYCLOPROPANE) (HYPOTHERMIA)
(BLOOD CIRCULATION, ARTIFICIAL)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

DARBINYAN, T.M.; KRAKOVSKIY, N.I.; ARAPOV, A.D.

Use of curare and curarelike drugs in anesthesiology. Zdrav. Kazakh.
21 no.5:73-77 '61. (MIRA 15:2)

1. Iz Instituta khirurgii imeni A.V. Vishnevskogo (direktor - prof.
A.A. Vishnevskiy) AMN SSSR.
(CURARE) (ANESTHETICS) (CURARELIKE SUBSTANCES)

VISHNEVSKIY, A.A., prof.; GALANKIN, N.K., doktor med. nauk; ARAPOV, A.D.; AKHMETOV, A.M.; VINITSKAYA, R.S., kand. biol. nauk; VOLINSKIY, Yu.D.; DARBINYAN, T.M., kand. med. nauk; DONETSKIY, D.A., kand. med. nauk; KLEMENOVA, Ye.S.; KUDRYAVTSEVA, A.M., kand. med. nauk; KRYMSKIY, L.D., kand. med. nauk; LOKSHINA, K.A.; MAZAYEV, P.N., prof.; PANOVА, Yu.M.; PROMTOVA, T.N., kand. biol. nauk; PYL'TSOV, I.M.; SERGEYEVA, K.A., kand. med. nauk; KHARNAS, S.Sh., kand. med. nauk; KHRUSHCHEVA, kand. med. nauk; TSUKERMAN, B.M., kand. biol. nauk; SHIK, L.L., prof.; GOL'DGAMMER, K.K., red.; BALDINA, N.F., tekhn. red.

[Congenital defects of the heart and large vessels] Vrozhdennye poroki serdtsa i krupnykh sosudov; rukovodstvo dlia vrachei. Moscow, Medgiz, 1962. 577 p. (MIRA 16:1)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Vishnevskiy).

(CARDIOVASCULAR SYSTEM—DISEASES)

SARKISOV, D.S.; DARBINIAN, T.M.; MAZAYEV, P.N.; KRYMSKIY, L.D.;
RUBETSKOI, L.S.

Data on the problem of the reversibility of lesions of the
cardiovascular syste. Sbor.trud.Inst.khir.AMN SSSR no.1:61
83 '62. (MIRA 16:1)
(CARDIOVASCULAR SYSTEM—DISEASES)

DARBINYAN, T. M.; PORTNOY, V. F.; KHARNAS, S. Sh.; AVRUTSKIY, M. Ya.;
VINITSKAYA, R. S.

General deep hypothermia in heart surgery. Eksper. khir. i anest.
no.2:51-58 '62. (MIRA 15:6)

1. Iz Instituta khirurgii imeni A. V. Vishnevskogo AMN SSSR
(direktor - deystvitel'nyy chlen AMN SSSR, prof. A. A.
Vishnevskiy)

(HEART-SURGERY) (HYPOTHERMIA)

DARBINYAN, T.M.; PORTNOY, V.F.; ZUBAREVA, R.A.

Isolated aritificial circulation and deep hypothermia of the brain.
Eksper. khir. i anest. 7 no.4:73-80 Jl-Ag '62. (MIRA 17:5)

1. Iz Instituta khirurgii imeni A.V.Vishnevskogo (dir. -
deystvitel'nyy chlen AMN SSSR prof. A.A.Vishnevskiy) AMN CSSR.

SMELOVSKIY, S.I.; DARBINIAN, T.M.; KRYMSKIY, L.D.

Extrapericardial fixation of the stump of the left pericardial appendage by a blind suture of the pericardium as a method of preventing some complications following mitral commissurotomy.
Eksper. Khir. i anest. 7 no.5:24-28 S-O '62.

(MIRA 17:10)

1. Iz Instituta khirurgii imeni Vishnevskogo (dir.- deystvitel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR.

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

DARBINYAN, T.M.

Anesthesia in moderate hypothermia. Vest. AMN SSSR 17 no.8:39-43
'62. (MIRA 15:12)

1. Institut khirurgii imeni A.V.Vishnevskogo AMN SSSR.
(HYPOTHERMIA) (HEART-SURGERY)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5"

DARBINYAN, T.M.; PRUNIS, N.M.

Inducted anesthesia conducted with steroid preparations.
Eksper. khir. i anest. no.1:50-56'63. (MIRA 16:10)

1. Iz laboratorii anesteziologii Instituta khirurgii imeni
A.V.Vishnevskogo (dir. - deystvitel'nyy chlen AMN SSSR
A.A.Vishnevskiy) AMN SSSR.
(ANESTHESIA) (STEROID DRUGS)

DARBINYAN, T.M.; VINITSKAYA, R.S.

Adequate ventilation and study of CO₂ of the expelled air during operations on a "dry" heart under hypothermia. Trudy TSIU 59:147-155 '63. (MIRA 17:9)

1. Laboratoriya anestezicologii (zav. T.M. Darbinyan) i laboratoriya fiziologii (zav. prof. L.L. Shik) Instituta khirurgii imeni A.V. Vishnevskogo (direktor deystvit'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR.

DARBINYAN, T.M.; SARKISOV, D.S.; KRYMSKIY, L.D.; CHEHNYAKHOVSKIY, F.R.

Postoperative pulmonary atelectasis in patients with congenital heart defects. Grud. khir. 5 no.6:26-34 N-D'63 (MIRA 17:2)

1. Iz Instituta khirurgii imeni A.V.Vishnevskogo (direktor deystvitel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR. Adres avtorov: Moskva, B. Serpukhovskaya ul., d. 27. Institut khirurgii Imeni A. Vishnevskogo.

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R000509720003-5

SMOL'NIKOV, V.P.; DARBINYAN, T.M. (Moskva)

What every surgeon and anesthetist should know and remember.
Eksper. khir. i anest. 8 no.3:3-6 My-Je'63 (MIRA 17:1)

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CIA-RDP86-00513R000509720003-5"

VISHNEVSKIY, A.A.; DARBINYAN, T.M.; PORTNOY, V.F.; KHARNAS, S.Sh.

Isolated artificial cerebral circulation combined with general moderate hypothermia a new method of performing surgery on an open heart; experimental substantiation and clinical practice. Eksper. khir. i anest. 8 no.3:6-13 My-Je '63 (MIRA 17:1)

1. Iz Instituta khirurgii imeni A.V.Vishnevskogo (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR.

DARBINYAN, T.M.; CHERNYAKHOVSKIY, F.R.

Anesthesia in surgery and painful bandaging of burned persons.
Eksper. khir. i anest. 8 no.3:77-82 My-Je'63 (MIRA 17:1)

1. Iz laboratorii anesteziologii Instituta khirurgii imeni
A.V.Vishnevskogo (dir. - deyствител'nyy chlen AMN SSSR prof.
A.A. Vishnevskiy) AMN SSSR,

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AMN SSSR prof. Vishnevskiy) AMN SSSR, Moskva.

DARBINYAN, T.M., doktor med. nauk; DOLINA, O.A.

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